

Date: Tuesday, 12/5/2006 8:20:49 AM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BOLT
Job Number	: 29828		
Estimate Number	: 10372		
P.O. Number	: <u>N/A</u>	Part Number	: D312121
This Issue	: 12/5/2006	S.O. No.	: <u>N/A</u>
Prsht Rev.	: NC	Drawing Number	: D3121 REV D
First Issue	: <u>N/A</u>	Project Number	: N/A
Previous Run	: 29698	Drawing Revision	: D
		Material	: <u>N/A</u>
		Due Date	: 12/23/2006
Written By	: <u>JA</u>	Qty:	100
Checked & Approved By	: <u>JA 06/12/05</u>	Um:	Each
Comment	: Est. A04/02/09 New issue KJ/DS		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	M303H0500	303 HEX BAR
-----	-----------	-------------



Comment: Qty.: 0.0417 f(s)/Unit Total : 4.1700 f(s)  
 303 HEX BAR  
 Material: AISI 303 SS 1/2" Hex Bar  
 (M303H0.500)  
 Batch: 102286

JA 06/12/06

2.0	HARDINGE	HARDINGE CNC LATHE SMALL
-----	----------	--------------------------



Comment: HARDINGE CNC LATHE SMALL  
 1-Turn D3121-21  
 2-Identify as D3121-21  
 3-Deburr break all sharp edges 0.005" to 0.010"

JA 06/12/06

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

JA 06/12/06

4.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

JA 06.12.07

5.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1  
 Identify and Stock  
 Location: ST409

JB 06/12/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☐ No ☒ DQA: PD Date: 06/12/08  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 12/5/2006 8:20:49 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BOLT

Job Number: 29828

Part Number: D312121

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



107

Comment: FINAL INSPECTION/W/O RELEASE

06/12/08

Job Completion



U 06.12.08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

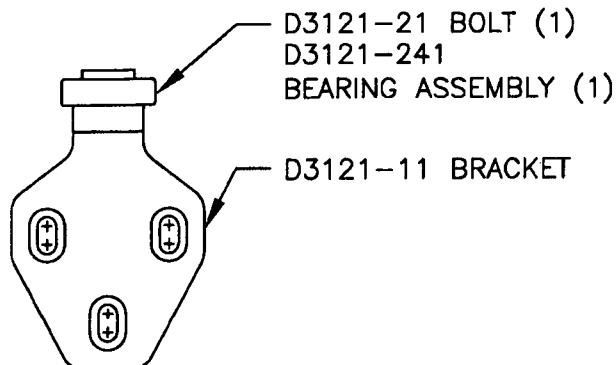


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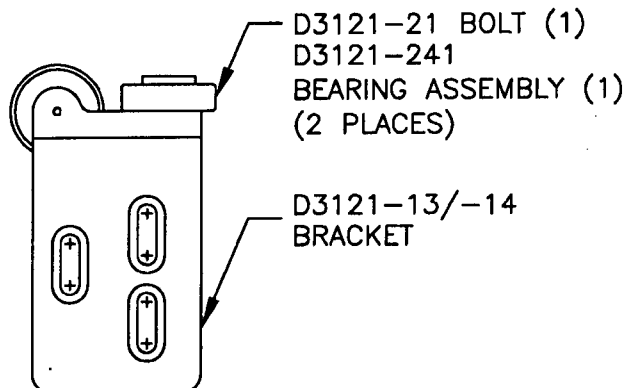
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		D3121	SHEET 1 OF 10
DATE		TITLE	SCALE
06.05.17		BRACKET ASSEMBLY	1:2
A	02.04.15	NEW ISSUE	
B	03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146	
C	04.02.17	ADD CLEARANCE; USE -241 BEARING	
D	06.05.17	D3121-25 CAP WAS 1.024, NOW 1.000	

**RELEASED**

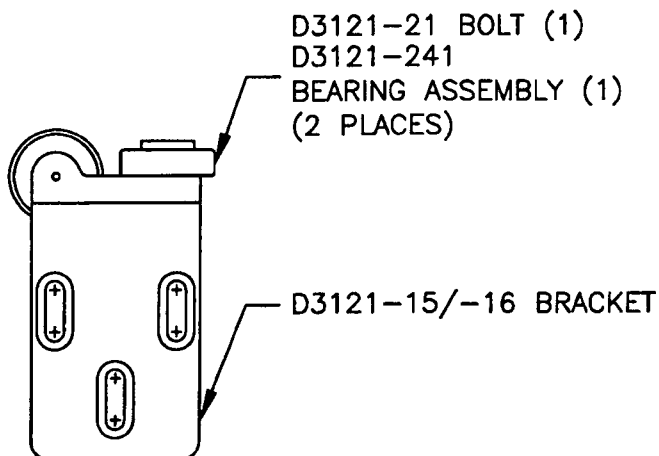
06.06.02



**D3121-041 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-33)



**D3121-043 (SHOWN) / D3121-044 (OPPOSITE) BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-37/-38)



**D3121-045 (SHOWN) / D3121-046 (OPPOSITE) BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-35/-36)

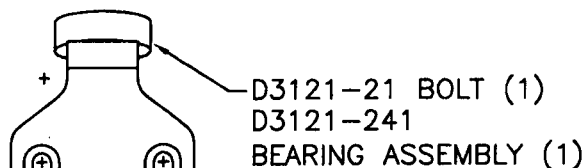
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DATE		TITLE	SCALE
06.05.17		BRACKET ASSEMBLY	1:2

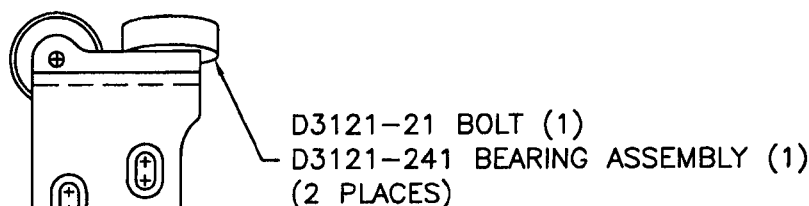


D3121-111 BRACKET

**D3121-141 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23001-01)

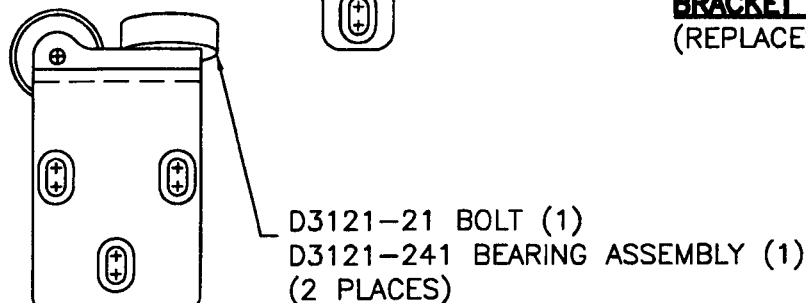
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D3121-113/-114 BRACKET

**D3121-143 (SHOWN) / D3121-144 (OPPOSITE) BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-03/-04)



D3121-115/-116 BRACKET

**D3121-145 (SHOWN) / D3121-146 (OPPOSITE) BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-05/-06)

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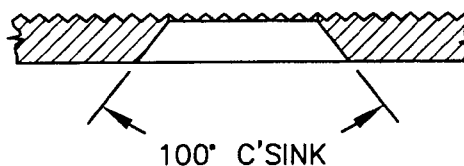
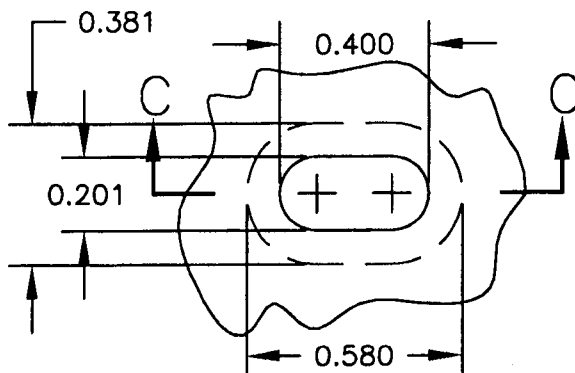
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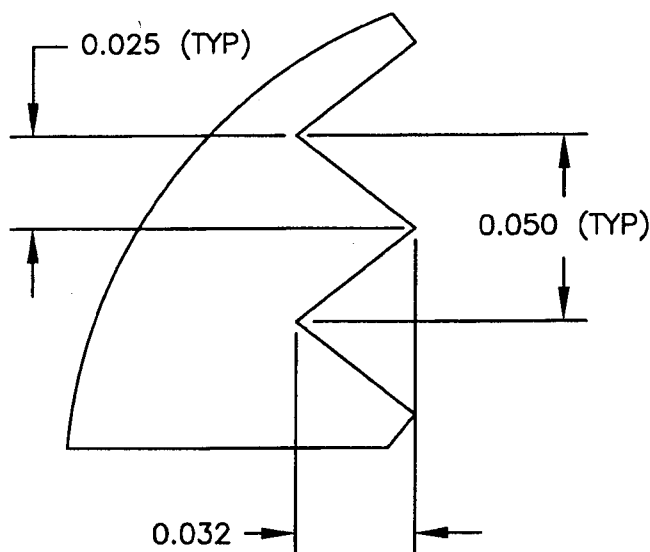
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DATE 06.05.17	TITLE BRACKET ASSEMBLY		SCALE 1:1

**DETAIL A:**  
**SLOT DETAIL**  
SCALE 2:1  
VIEW ROTATED



**SECTION**  
**C-C**

**DETAIL B:**  
**RIDGE DETAIL**  
PARTIAL SECTION  
SCALE 1:20



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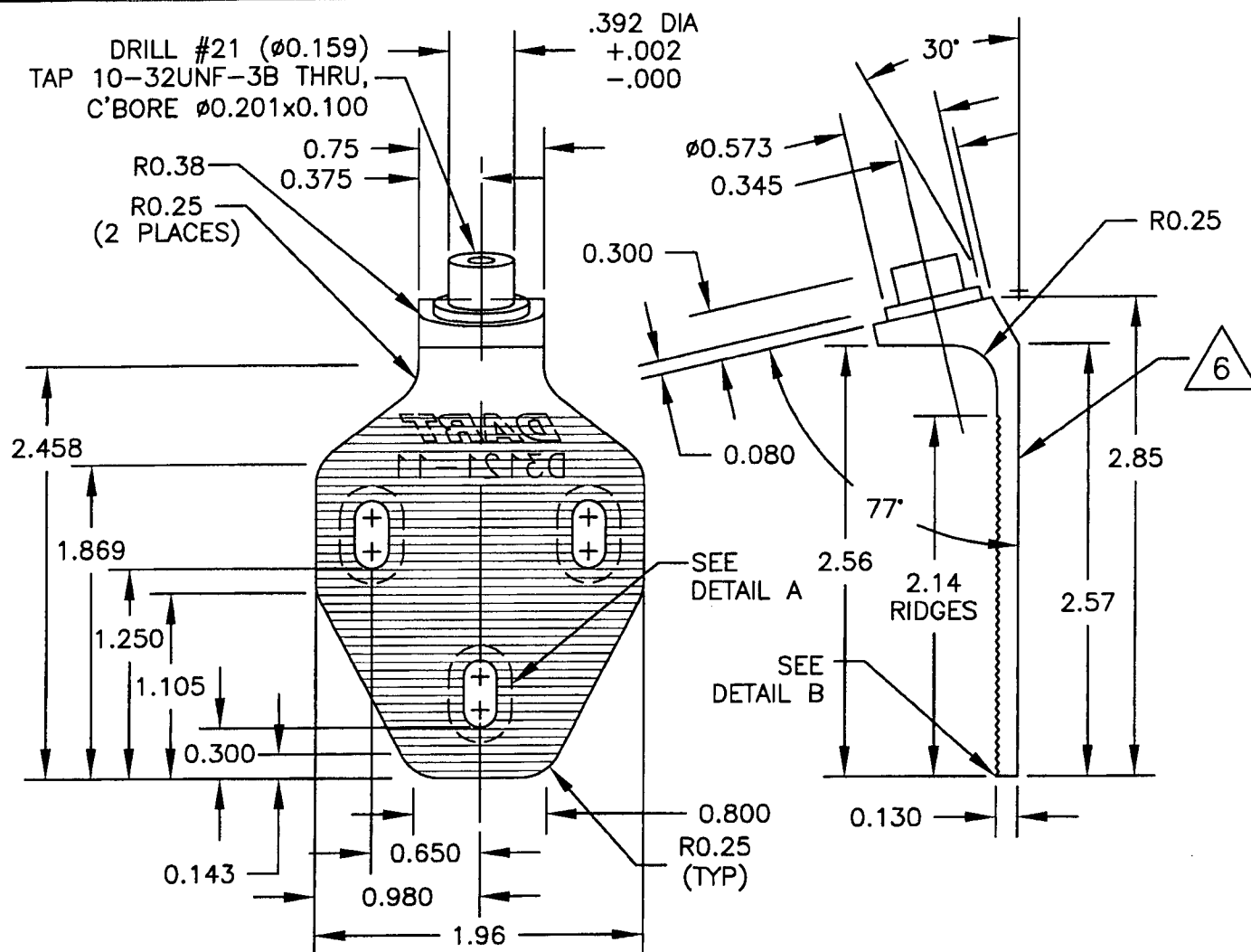
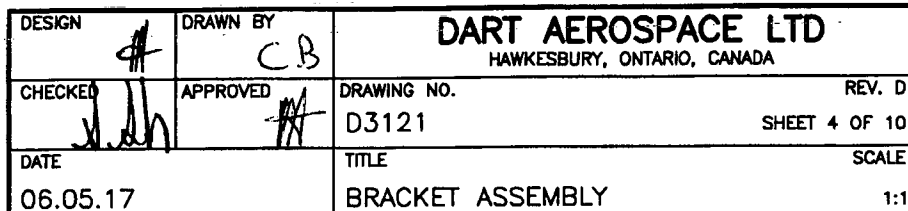
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1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

3) ALL DIMENSIONS ARE IN INCHES

4) BREAK ALL SHARP EDGES 0.005 TO 0.015

5) ENGRAVE DART P/N & LOGO AS SHOWN

6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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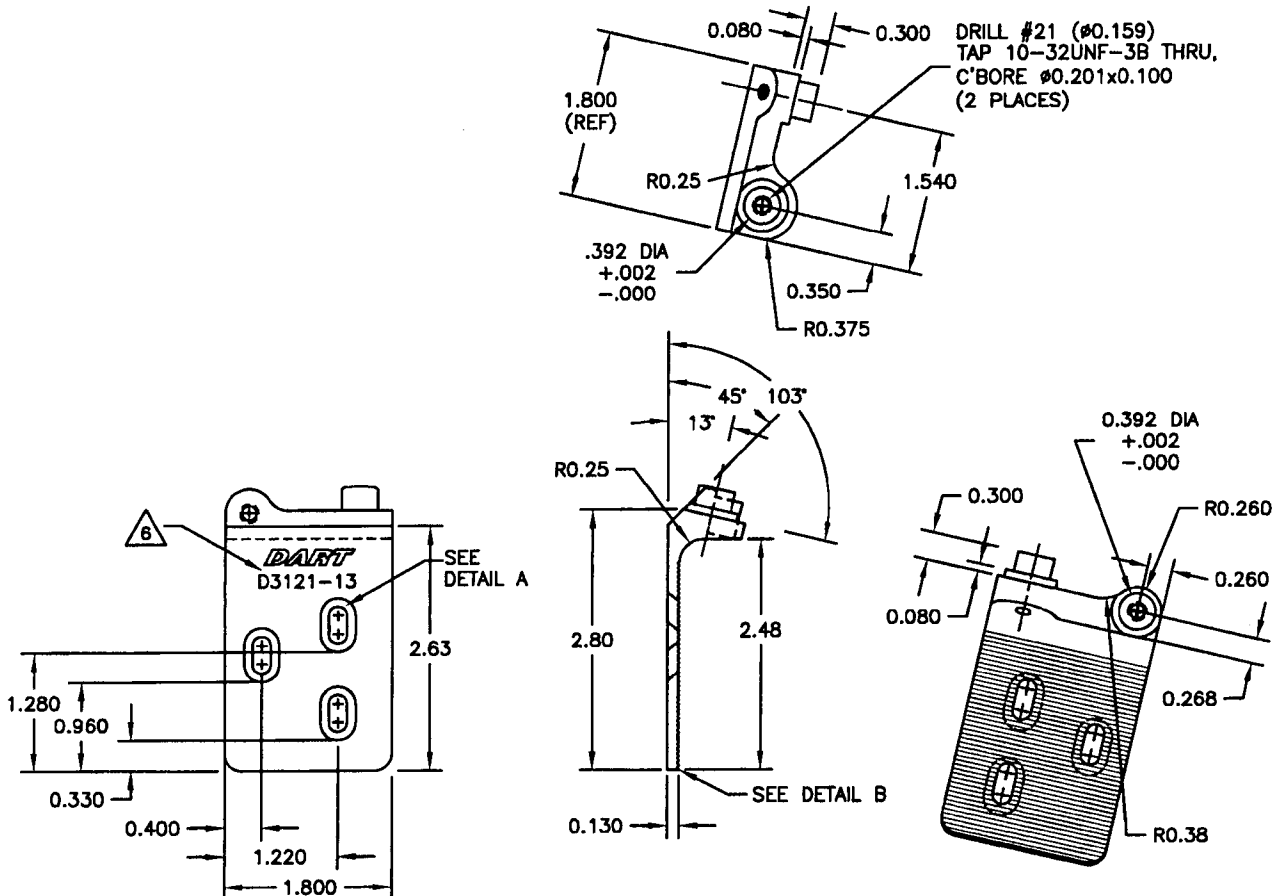
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DATE		TITLE	SCALE
06.05.17		BRACKET ASSEMBLY	1:2



**D3121-13 BRACKET (SHOWN)**  
**D3121-14 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE STRENGTH = 150 ksi  
MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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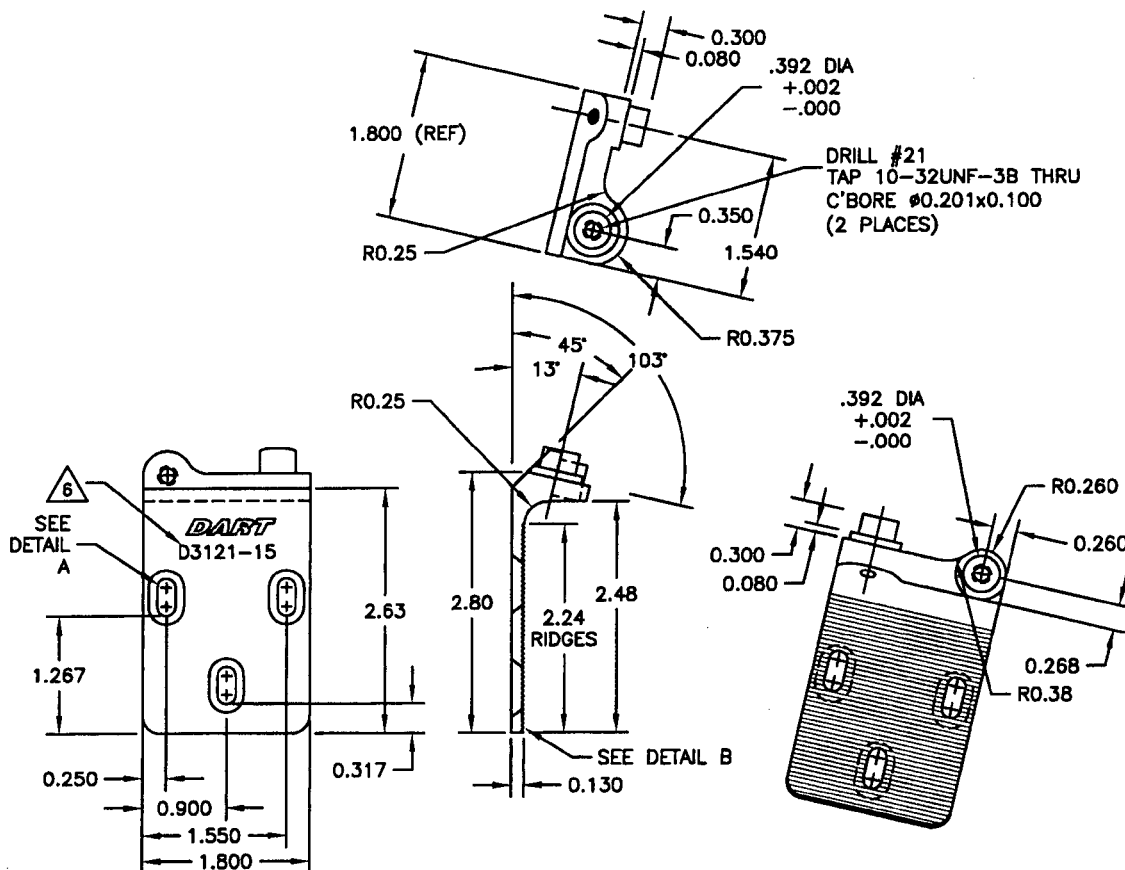
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DATE 06.05.17	TITLE BRACKET ASSEMBLY		SCALE 1:2



**D3121-15 BRACKET (SHOWN)**  
**D3121-16 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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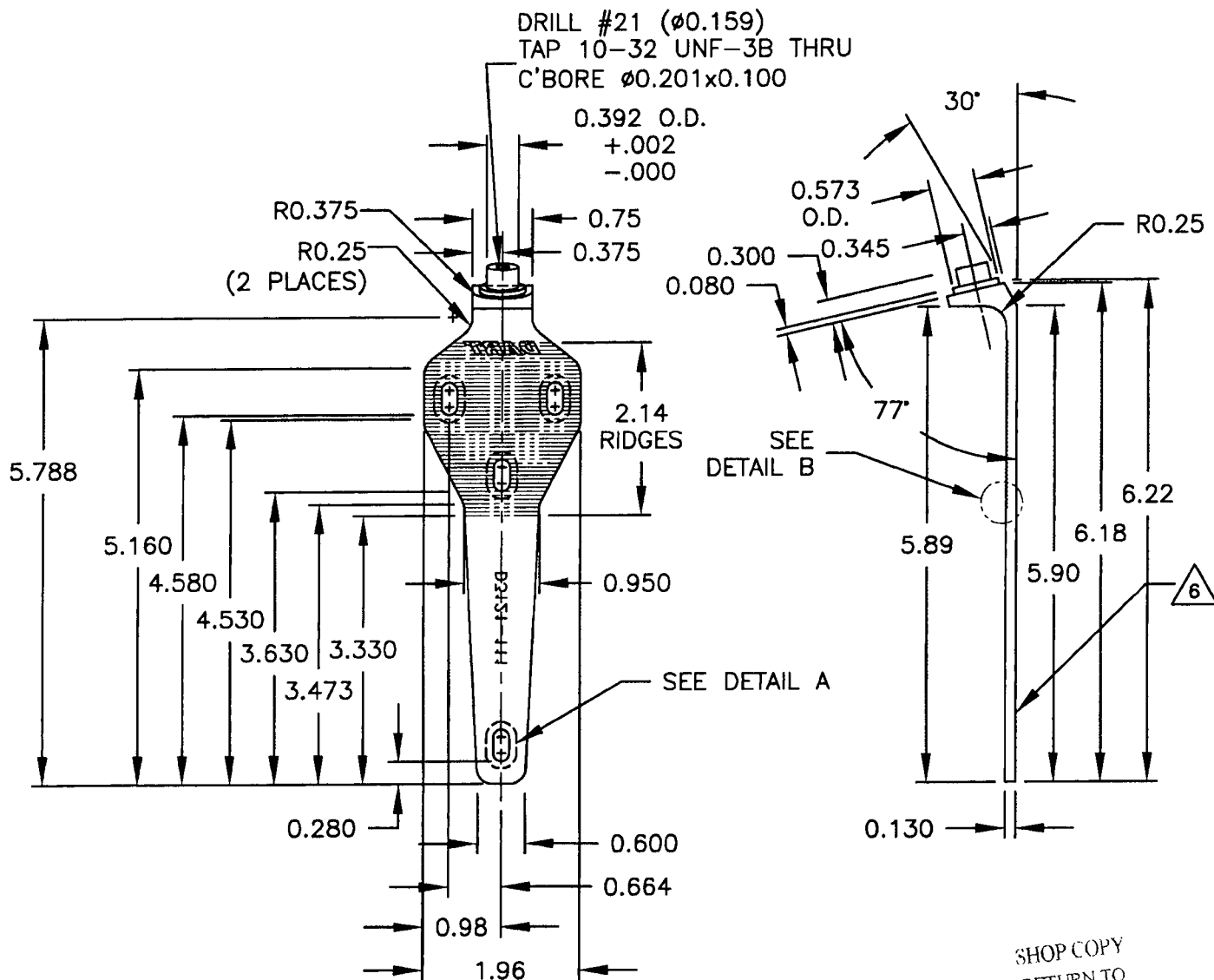
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DATE 06.05.17	TITLE BRACKET ASSEMBLY		SCALE 1:2

**D3121-111 BRACKET**

- 1) REPLACES PREMIER P/N B32-23001-11
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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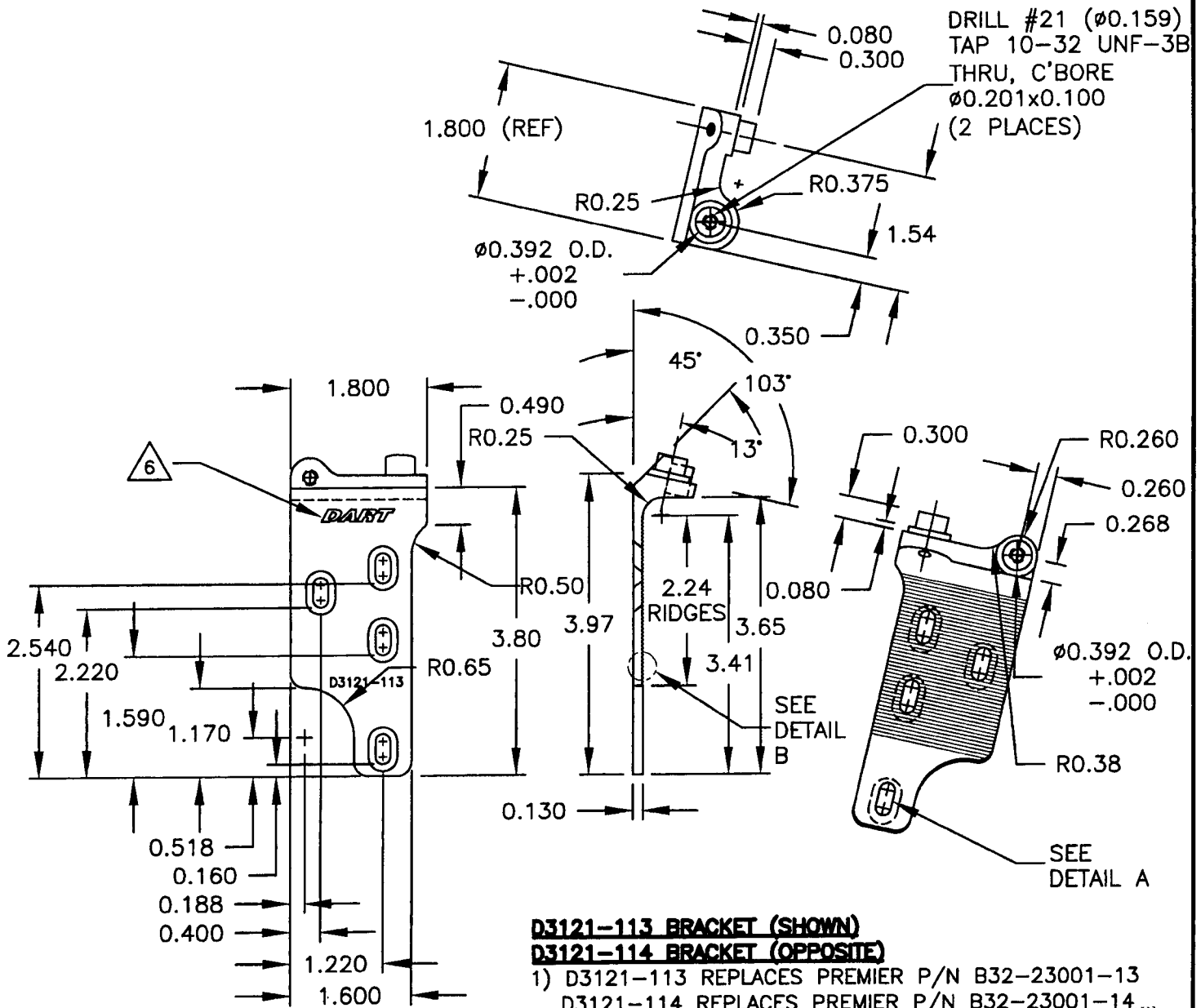
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		D3121	SHEET 8 OF 10
DATE		TITLE	SCALE
06.05.17		BRACKET ASSEMBLY	1:2

**D3121-113 BRACKET (SHOWN)****D3121-114 BRACKET (OPPOSITE)**

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13  
D3121-114 REPLACES PREMIER P/N B32-23001-14

- 2) MATERIAL: 17-4 SS PER AMS 5604/5643

(REF DART SPEC. M17-4-B)

MIN ULTIMATE TENSILE STRENGTH = 150 ksi

MIN YIELD TENSILE STRENGTH = 100 ksi

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 4) ALL DIMENSIONS ARE IN INCHES

- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN

- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

**RELEASE**

06.06.02

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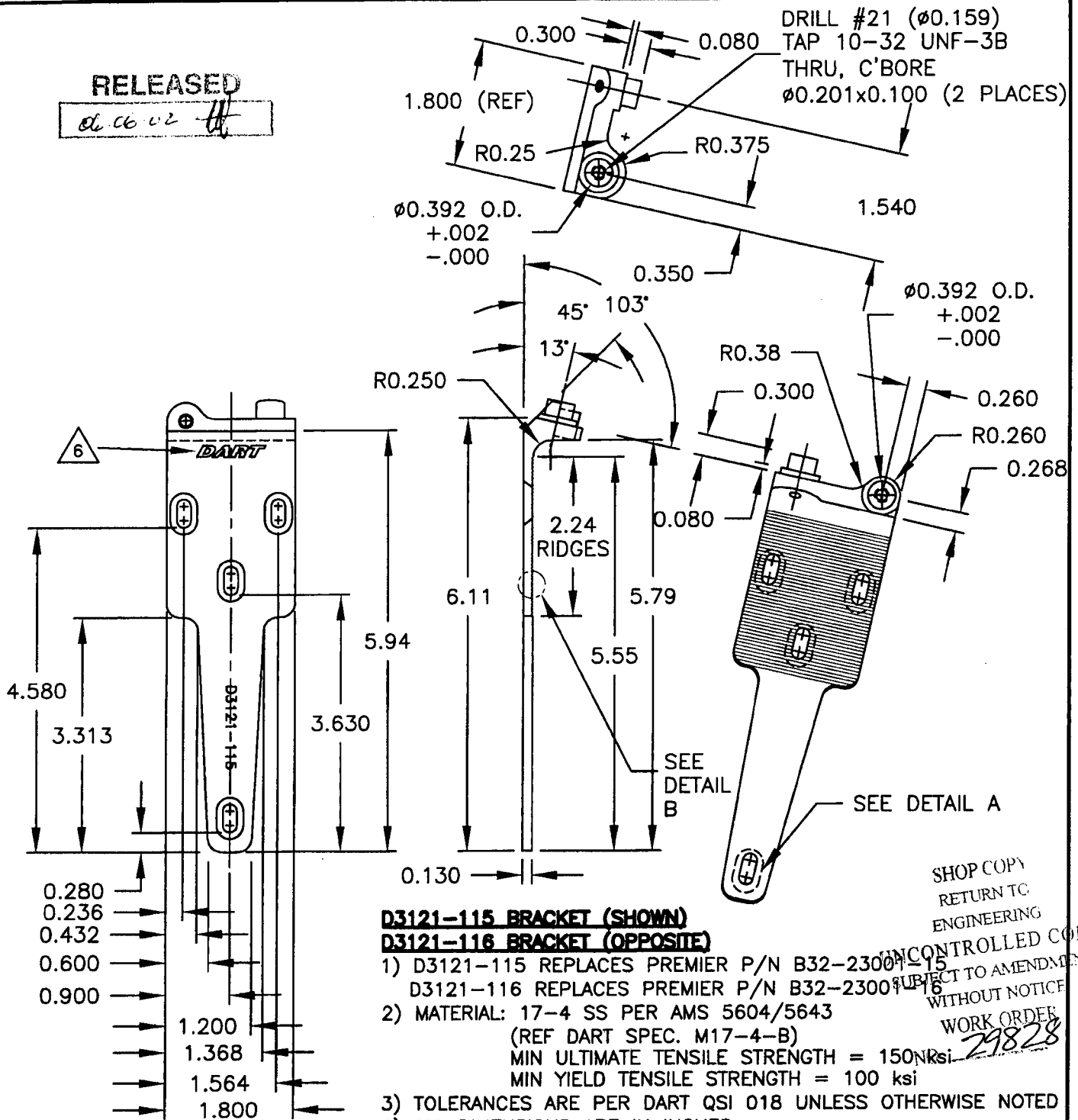
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DATE 04.02.18	TITLE BRACKET ASSEMBLY		SCALE 1:2

RELEASED

04.06.02 JH

**D3121-115 BRACKET (SHOWN)****D3121-116 BRACKET (OPPOSITE)**

- 1) D3121-115 REPLACES PREMIER P/N B32-23001-15  
D3121-116 REPLACES PREMIER P/N B32-23001-16
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE STRENGTH = 150KSI  
MIN YIELD TENSILE STRENGTH = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

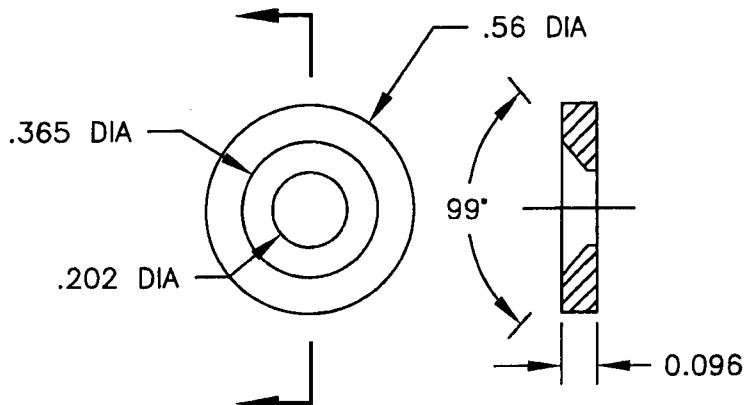
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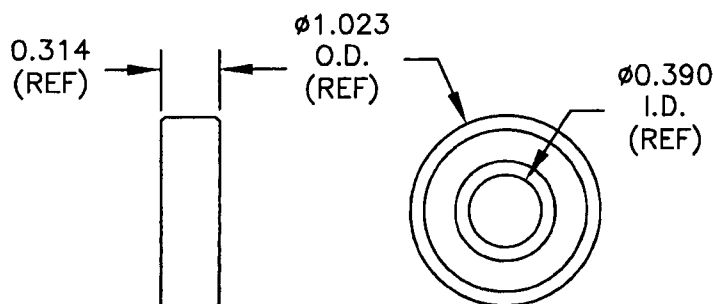
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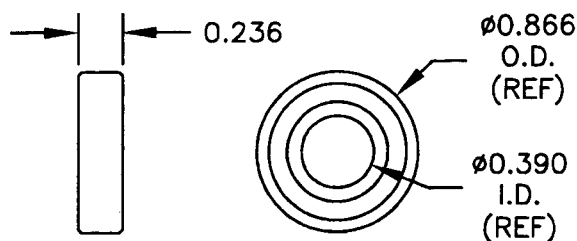
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		D3121	SHEET 10 OF 10
DATE		TITLE	SCALE
06.05.17		BRACKET ASSEMBLY	1:1

**D3121-17 WASHER (SCALE 2:1)**

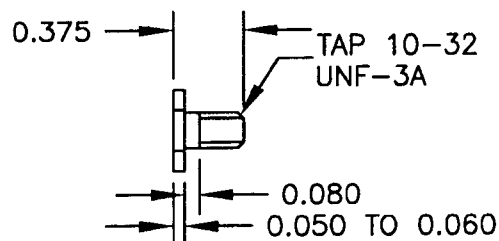
- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-19 BEARING (SCALE 1:1)**

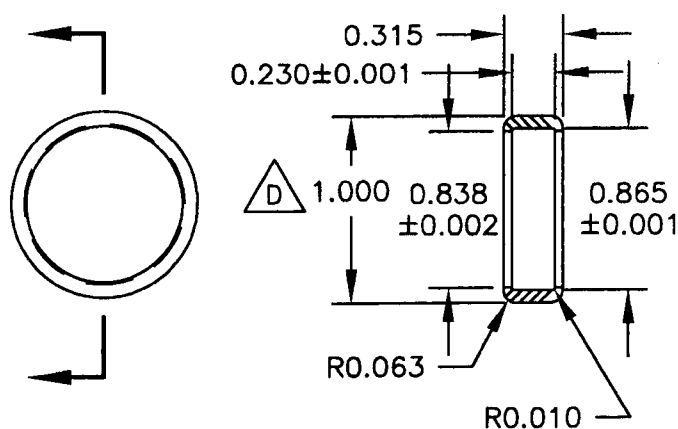
- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-23 BEARING (SCALE 1:1)**

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z OR KML P/N 6900-ZZ
- 2) ALL DIMENSIONS ARE IN INCHES

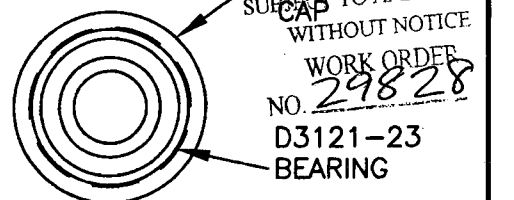
**D3121-21 BOLT (SCALE 1:1)**

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-25 CAP (SCALE 1:1)**

- 1) MATERIAL: DELRIN ROD, 1.25 (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

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06-06-02

**D3121-241 BEARING ASSEMBLY (SCALE 1:1)**

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